Winter wraps and bathing suits are used over the National Park to Park Highway.

Tourists Enjoy Life on Highway 6,000 Miles Long

ONE of many innovations that residents of many states are taking advantage this summer in traveling over the National Park-to-Park Highway has to do with sleeping under the stars in a tent pitched in a free municipal camp, if they wish, or resting in a comfortable hotel, in the Rockies or Sierras. There are fully 100 municipal camps scattered along the 6,000-mile highway that connects the 12 national parks of the West, so that the road tourist, if he desires, may spend three months in the open while making this journey through America's wonderland.

The circle highway, traversing 11 states, has direct connections with transcontinental highways. Its promoters look upon the Yellowstone trail, Lincoln and Roosevelt international highways as scenic belts of a recreation wheel that draws road tourists westward, with the parks as magnets.

The highway also touches Rocky Mountain and Mesa Verde, where prehistoric cliff dwellers originated the apartment house idea 1,000 years ago; passes through the petrified forest of Arizona to reach Grand Canyon; also touches Zion in Utah; and Grant, Sequoia, Yosemite and Lassen, with its active volcano, in California, and continues to Crater, Rainier and Glacier Parks.

This highway has the support of the A. A. A. and the National Park Service, and Congress some day will be asked to hard-surface the entire way. Winter wraps used in crossing the Rockies in the middle of July are substituted temporarily for bathing suits a little later at Pacific Coast beaches.

Gus Holmes, secretary of the National Park-to-Park Highway Association, with general offices in Denver, is preparing a road guide for tourists which will be furnished free, upon request, to any address.

Naval Battles for 3,000 Years Won by Surprises

TODAY the world, when it thinks of war at all, is thinking of navies. Former Secretary Daniels introduced this country's greatest naval program, one which is designed to place this nation on a par, in sea power, with any other nation.

The history of sea power is more than 34 centuries old; and the curious thing about it, which it is purposed showing here, is the advent of surprises from time to time, and the inevitable success that came to him with the biggest surprise. Naval power is the story of surprises.

Sea power was first held by the Cretans, who ruled the Mediterranean 14 centuries before Christ, and gave way to the Phoenicians. The Phoenicians, originally, were not sailors at all, but mere wandering tribes of landsmen; they wandered as far as the coast and settled, finding themselves in a narrow strip of coast between a range of mountains and the sea, so they became sailors. Then Persia rose under Xerxes; and Athens toppled the Persians, and the men of Syracuse struck down the Greeks; then the Carthaginians ruled the seas until Rome spread her rule all over the world. Then the Saracen rose and held many of the water routes during his long assault on Constantinople. Venice became mistress of sea commerce, and gave way to the Turks, when they ultimately captured Constantinople. The Moors, with their famous pirate-admirals of whom Barbarossa was the chief, ravaged the seas, until Spain took supremacy. Then came a triangular contest between Spain, with her wealth of colonies and treasure; the Netherlands and the British. First Spain, then the Dutch fell, until at last Britain was left mistress of the seas. Germany, at one time, contemplated challenging this supremacy. Today the United States is the rival, entering rapidly on first place.

The first big surprise introduced into naval battles was at Salamis, 480 B. C., when the Persians, under Xerxes, undertook to subdue the whole of Greece. Xerxes constructed a bridge of boats across the Hellespont and transported thus an army estimated variously at 1,000,000 and 5,000,000. His fleet numbered 1,200 triremes—vessels with three banks, or sets, of rowers. Details of the preliminary skirmishes, and the fall of Thermopylae by the treachery of a Greek need not be recounted. We come to the critical time when Themistocles, the Athenian, with a small fleet, was obliged to face Xerxes and his large fleet, and a fleet, moreover, which was in touch with his shore forces, and so could obtain easily all necessary supplies.

Themistocles conceived the idea—since that day adopted as a maxim—that the first duty of an inferior force is to determine the battle-ground in a location where the superior force loses its advantage. This he accomplished by placing his fleet in the straits of Salamis, and attracting the Persian fleet there. When the Persian fleet crowded into the narrow waters, their numbers were a disadvantage, and they were thrown back on each other in confusion. Xerxes from a hilltop beside the strait witnessed the disaster, marched his army back and thought himself lucky to get it back home in safety.

The next surprise came in the battle of Naupatkis, 50 years after Salamis. Here Phormio was the Athenian commander, and his opponents were the Corinthians, with a fleet four times as great in numbers. Phormio was found at sea by the Corinthians who thought he was an easy prey; they had feared he would choose narrow waters, as did his predecessor, Themistocles, under similar conditions. Phormio chose the open water purposely—because he had a surprise. He had vessels, narrower and faster than anything seen before, and he literally rowed all around the Corinthians, and ultimately put their big fleet to rout.

Athens, who twice had vanquished important foes by means of a surprise, herself became a victim of one in a battle which sounded the knell of her reign as a sea power. This was in 415, when Athens embarked on an ambitious plan to capture Syracuse, and from that base, Italy. The Syracusans had a comparatively small fleet, and adopted the same tactics as did the Athenians under Themistocles, chosing narrow waters. But they had a bigger trump than that. They had some boats with specially strengthened bows for ramming and, what was chiefly important, had erected catapults for throwing heavy stones on the decks of the enemy. Against this deadly rain the Athenians had no defense, and so were completely defeated.

In 260 B. C. the world saw an astonishing thing—a land power become a sea power and conquer its world with its ships. Rome did this, and it scored its great success with a surprise launched against the sea-ruling Carthaginians off the port of Mylae.

It was only a little later, after another successful engagement against the Carthaginians, that the Romans themselves met with a disastrous surprise on land. The Romans landed in Africa and were almost at the gates of Carthage, when a clever Spartan leader, Xanthippus, turned toward the advancing Romans a herd of elephants, before which the Romans fled and were destroyed, their general (the consul Regulus) being captured.

In 673 a great Arab (Saracen) Armada forced the Hellespont, and laid siege, winter and summer, to Constantinople, which city at that time was ruled by Constantine V. During this siege, and probably in 676, a Syrian architect, Callinicus, invented "Greek fire," and brought his secret to Constantine. It has been described as "a semi-liquid substance, composed of sulphur, pitch, dissolved niter, and petroleum boiled together and mixed with certain less important and more obscure substances. When ejected it caught the woodwork on which it fell and set it so thoroughly on fire that there was no possibility of extinguishing the blaze. It could be put out only by pouring vinegar, wine or sand upon it."

The emperor was shrewd enough to see its importance, and he soon equipped his revolving turrets on the "dromons" with brass tubes, or "siphons" for throwing the "fire." Earthenware jars containing it were to be flung, and darts and arrows were wrapped in tow soaked in the Greek fire.

The small Christian fleet sailed out and the huge Saracen Armada bore down on it. The Greek fire was so effective that the Saracens turned tail and scattered. The secret was carefully preserved in the Greek capital for centuries, and it was not until the fourteenth century, when gunpowder came into use, that "Greek fire" lost its terrors and its supremacy.

When Constantinople did fall, in 1204, and due chiefly if not wholly to the treachery of the Venetians, it was a surprise that ended the siege. Venetian galleys came equipped with a long flying bridge, that extended from the mast to the top of the wall, and was strong enough to bear a file of men that scrambled along it to the parapets.

The next important surprise in naval warfare was the "Galleon of Venice," a monster Venetian warship which absolutely baffled the Turkish fleet, which sailing out to give battle found it becalmed and practically alone. But when the broadsides of this giant ship were touched off, the Turkish fleet simply crumpled under them; a single shot weighing 120 pounds sank one galley with all on board. The Turks retreated.

In another battle with the Turks shortly after, the Christians introduced a more modern version of the floating forts of Antony's day. These were styled galleasses and were immense and almost impregnable affairs, armed with heavy artillery, but, like their precursors, exceedingly difficult to navigate; they just floated around over the battle-area, practically blindly.

Next we come to one of the most romantic episodes of history—the "Sea Beggars." This phrase was applied to the Dutch who rebelled against Spanish occupation of the Netherlands, and originated from a contemptuous remark by a Spanish courtier to Margaret of Parma, when the Dutch nobles presented their grievances in Brussels.

The "Sea Beggars" cheerfully accepted the name, and glorified it by driving the Spanish out of that part of Europe. The opening surprise was when the fleet of the "Sea Beggars" battered down the gates of Brill, located on an island at the mouth of the Meuse. The inhabitants fled; and when Spanish forces attempted to recapture the city, the "Beggars" opened sluice gates to cut off the northern approach, and at the same time set fire to the boats which had carried the Spanish to the island. The terrorized Spanish, victims of both fire and water, took to the mud and slime of the shore and tried to wade away.

Then comes Francis Drake, the pirate-admiral of Queen Elizabeth who, by ingenuity and the help of the storm, routed the great Spanish Armada. Not the superiority of the British fleet, but the clever utilization of wind and tide to bear clear down on the crowded enemy fleet anchored at night, eight fire hulks spurting flame and their ordnance exploding, broke the morale of the Spaniards. Then followed the first artillery duel of importance in naval history, and here the newer English devices brought victory. The Spanish were ready to fight on ancient methods—boarding and grappling. The British were prepared to fight with (for that day) long-range guns. It was harquebus fire and musketry on the one side and ordnance on the other. There could be only one result. The Spanish fleet turned tail and a slackening of the English pursuit at nightfall left the Spaniards to the storm which scattered their hulks all round the British coast and down to Spain. Of 130 ships only 50 fever-stricken vessels reached home; of the 27,000 sailors and troops manning the Armada, all but 10,000 perished, and many of these came home to die of disease.

Robert Blake, one of the greatest admirals of all time, was himself a surprise. He was an Oxford scholar, whose ambition was to become professor of Greek. His devotion took him into Cromwell's army, where he rose to be colonel of militia. And by one of those providential directions, Cromwell chose him, at 50 years of age, to command a ship. In British annals he stands second only to Nelson.

His surprise was the introduction of new naval tactics; evidenced particularly in his daring attacks on Porto Farina and Santa Cruz. The Moors at Morocco were not polite to Blake. They withdrew their ships inside the supposedly impregnable fortress harbor of Porto Farina and flouted him openly. Blake waited, and then, without any apparent reason, stood in to the attack. The narrow entrance was lined with castles and batteries. Blake had reasoned that the wind that took him in would roll the battle smoke on the enemy, which it did. He silenced the forts, sent boarding parties against the Tunisian ships and destroyed them and then withdrew.

From then on the history of surprise in naval warfare is the history of new tactics, although certain traditions have remained common to particular navy, just as the British navy has cherished the Nelson tradition, and the American navy cherishes the Dewey touch: "Fire when you are ready, Gridley."

It remained for the Great War to produce the greatest series of surprises, and the greatest of all these was the submarine.